CLARKE et al Appl. No. 09/529,342

May 20, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Claims 1-41 (Cancel).

(New) A method of detecting a cell type of interest present or potentially 42.

present in a sample comprising treating the sample with lipid vesicle particles which are

targeted to a targeted cell type to be detected, said particles having at least one layer of

enveloping lipids and incorporating a cytolytic peptide, which peptide, in response to a

predetermined metabolic signal from the targeted cell, if present in the sample, interacts

with the layer to act as or mediate the opening of pores or channels within the lipid layer

to thereby modulate the permeability of the particles, said particles further incorporating

a species which is activated on said modulation of permeability, and monitoring directly

or indirectly for the species.

43. (New) The method according to claim 42, wherein the cytolytic peptide

comprises an integral protein of the lipid layer.

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- 44. (New) The method according to claim 42, wherein the cytolytic peptide spans the lipid layer.
- 45. (New) The method according to claim 42, wherein the cytolytic peptide is non-covalently attached to an outer lipid layer.
- 46. (New) The method according to claim 42, wherein the particles comprise a binding agent capable of binding a particle to the cell type of interest when the particle is targeted thereto.
- 47. (New) The method according to claim 46, wherein the binding agent is an antibody for binding to an antigen on the cell type of interest.
- 48. (New) The method according to claim 42, wherein a portion of said particles have a first binding moiety and a further portion have a second binding moiety which is capable of binding with said first binding moiety whereby said particles are, or are capable of being, aggregated together.
- 49. (New) The method according to claim 48, wherein a collection of particles are aggregated around a cell to be detected.

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- 50. (New) The method according to claim 48, wherein the first binding moiety on some particles is avidin or a derivative thereof, and the second binding moiety on other particles is biotin or a derivative thereof.
- 51. (New) The method according to claim 42, wherein the cytolytic peptide is selected from the group consisting of GALA, Helical erythrocyte lysing peptide (HELP), KALA, and LAGA.
- 52. (New) The method according to claim 42, wherein the cytolytic peptide is N, Myristic-GALA.
- 53. (New) The method according to claim 42, wherein the cytolytic peptide is selected from the group consisting of Amphotericin B, Alamethicin, Gramicidin, Melittin, Nigericin, P25, Polymixin B, Valinomycin, and Vibriolsin.
 - 54. (New) The method according to claim 42, wherein the species is a dye.
 - 55. (New) The method according to claim 42, wherein the species is an enzyme.
- 56. (New) The method according to claim 55, wherein the enzyme is alkaline phosphatase, β-Galactosidase or asparaginase, or glucose oxidase.

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- 57. (New) The method according to claim 42, wherein the species is a co-factor or substrate for an enzyme.
- 58. (New) The method according to claim 42, wherein the cells to be detected are pathogenic cells.
- 59. (New) The method according to claim 58 for analysing foodstuff for the presence of pathogenic cells.
- 60. (New) The method according to claim 58 for analysing water samples for the presence of pathogenic cells.
- 61. (New) The method according to claim 58 for detecting the presence of pathogenic cells in a human or animal body.